

UNCLASSIFIED

AD NUMBER

AD400901

NEW LIMITATION CHANGE

TO

**Approved for public release, distribution
unlimited**

FROM

**Distribution authorized to U.S. Gov't.
agencies and their contractors; Foreign
Government Information; DEC 1962. Other
requests shall be referred to US Library
of Congress, Attn: Aerospace Technology
Division, Washington, DC.**

AUTHORITY

ATD ltr, 2 Dec 1965

THIS PAGE IS UNCLASSIFIED

400901

S/526/62/000/024/008/013
D234/D308

AUTHORS:

Virozub, I.O., Horbatyy, Yu.P., Yeremenko, O.S. and Fedosenko, H.P.

TITLE:

Aerodynamic investigations of a turbine stage with relatively short blades under varying operating conditions

SOURCE:

Akademiya nauk Ukrayins'koyi RSR. Instytut teploenergetyky. Zbirnyk prats'. no. 24, 1962. Teploobmin ta hidrodynamika, 91-97

TEXT:

The ratio of mean diameter to blade length in the working wheel was 10.38. The flow parameters were measured before the first directional device, in the gap between it and the working wheel, and behind the working wheel, in seven sections along the channel heights. The air flow rate was constant for different numbers of revolutions. The full pressure remains nearly constant in the core of the stream and drops sharply near the outlet edge. The velocity of rotation did not affect the efficiency of the direction.

Card 1/2

Aerodynamic investigations ...

S/526/62/000/024/008/013
D234/D308

al grid. The outlet angles decrease with increasing velocity coefficient. Energy losses are greatest near the blade ends. In the channels of the working wheel a considerable part of the working substance flows from the root towards the end, especially when the velocity of rotation increases. The experimental increase of the axial component of velocity is much larger than the calculated one. The rate of flow through different sections of a thin cylindrical layer of the working substance is not constant. There are 9 figures and 1 table.

Card 2/2